

TECHNICAL INFORMATION



HF 411M/UV

March 2020

THERMOPLASTIC HALOGEN FREE, FLAME RETARDANT AND LOW SMOKE EMISSION COMPOUND, FOR CABLE INSULATION AND SHEATING

Description

HAX HF 411M/UV is a thermoplastic flame retardant, UV resistant (UL 1581 section 1200//ISO 4892) and halogen free compound, made on polyolefinic basis. It can be used for the production of energy, signal and control cables.

The properties of this compound comply with the requirements of EN 50363-0 type M1-M16, EN 50290-2-27, VDE 0207 Part 24 type HM2 & HM4, EN 50363-7 type TI7, IEC 60502 ST8, IEC 60092-359 type SHF1, VDE 0250 Part 215 type HM5, VDE 0207 Part 23 type HI2 and BS 7655 type LTS1, LTS2 & LTS4.

Technical characteristics

Property	Test method	Unit	Typical Value
Density	ISO 1183	g/cm ³	1,49
Hardness at 15"	ISO 868	Shore D	52
Tensile strength	ISO 527	N/mm ²	14.0
Elongation at break	ISO 527	%	190
Tear strength 23 °C (500 mm/min)	BS 6469 99.1	N/mm	7,0
Oxygen Index	ISO 4589	% O ₂	40
Hot pressure test at 90 °C	IEC 60811	%	< 50
Melt Flow Index (150 °C/21.6Kg)	ISO 1133	g/10 min	4.5
Volume Resistivity 20 °C (Alternating Polarity Method)	ASTM D257 Electrodes	Ω·cm	5 · 10 ¹⁴
Water absorption	IEC 60811	mg/cm ²	< 5.0
Emission of Halogenidric acids	EN 50267-2-1/IEC 60754-1	%	< 0.5
pH	EN 50267-2-2/IEC 60754-2		> 4.3
Conductivity	EN 50267-2-2/IEC 60754-2	μS/mm	< 10

The typical values reported in the table have been obtained from measurements made on extruded samples or pressed plates

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Processing

This thermoplastic compound has been designed for an easy processing, whilst maintaining good mechanical-thermal properties, and a medium-high LOI value.

It can be processed using extruders with a low screw compression ratio (halogen free or PVC type), and with a temperature profile as that given below, which is however indicative, as it may depend on the equipment design adopted.

Zone 1	Zone 2	Zone 3	Zone 4	Collar	Head	Die
130 - 150	130 - 160	140 - 160	140 - 160	150 - 165	150 - 165	150 - 170

Storage

The thermoplastic compound must be stored at ambient temperature (not exceeding 30°C) in closed and unbroken bags, in order to avoid exposure to sunlight and moisture. Long stocking time may negatively affect the quality of the material. Therefore it shall be used within 3 months from the compounding date. After this time it's necessary to dry the material before extrusion.

Packaging

Available in 25 Kg PE bags, big bags or oktamins of 1250 Kg on wooden pallet

Our technical service is at your disposal, for further information and assistance.

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